ARCTIC SLOPE TELEPHONE ASSOCIATION COOPERATIVE, INC.
QRA Road Mile and Road Crossings certification attachment

Introduction and Background

Pursuant to discussions beginning in February and including two ex partes in July, ASTAC discovered that the FCC inputs overstated the number of road miles that ASTAC has the ability to access for service to its customers. As explained in detail in the attachment, Arctic Construction and Maintenance Challenges on the North Slope, Alaska is different and the North Slope is extreme.

It is understandable that there was some confusion with the models that were used for this purpose due to the very different circumstances in Alaska that are unique. This overstatement of road miles was caused by a number of factors, including: The FCC included a number of types of trails (Caribou Migration, Foot, Jeep, Tracter, Tractor, and Winter) in its count, as well as a number of unnamed roads. Further investigation of some of the unnamed roads revealed that they traverse the tundra and even lakes and up the middle of rivers. As a point on interest, the tundra can barely support the weight of a human being in the summertime; vehicles would quickly become high centered and the driver subject to a healthy fine for going off road and scarring the tundra[1]. As noted in the September 4, 2012 newsletter of Alaska's United States Senator Lisa Murkowski: "*Flying over the North Slope in a helicopter, a land that is more water than terrain, walking on the tundra that is like a magnificent sponge filled with color and water and delicate flowers*." We have included a federal agency map [United States Department of the Interior Geological Survey map for tractor trails for ASTAC service territory – Barrow (A-4) Quadrangle, Alaska –North Slope Borough, 1:63 360 Series (Topographic), N7100 – W15618 / 15x36 (in paper copy file only)] that illustrates the North Slope Borough unique topographical fragility.

There is limited connectivity between the villages and these ghost roads out in no man's land. The Deadhorse exchange is the only exchange that has terrestrial transportation via the Dalton Highway. It also appears that the FCC data double counted State Highway 11 and the James Dalton Road, as it is the same road. In addition, ASTAC service stops about two miles down the road, and after that the observer would experience an abundance of gravel, bears, and mosquitoes until he or she would reach the next settlements at Coldfoot and Wiseman, which are served by Summit Telephone.

[1] The only equipment that can traverse the tundra in the wintertime is known as a rolligon. It is the only vehicle allowed off the gravel that won't damage the fragile tundra and is used to resupply remote sites for winter exploration. ASTAC does not presently have a rolligon in its rate base.

Replication of FCC Data

Our initial step was to replicate the data sources used by the FCC, in order to provide a basis to perform the subtraction for the non-accessible roads and six types of trails noted above for ASTAC.

Application to Actual Data

We have removed the non-accessible roads and six types of trails and included our files on the CD-Rom. The result is noted in the following chart:

Exchange	Miles	Crossings
Anaktuvuk	4.6	58
Atqasuk	47.6	73
Barrow	554	786
Deadhorse	457	160
Kaktovik	34.27	172
Nuiqsut	34.11	76
Pt Hope	16.33	71
Pt Lay	9.16	63
Wainwright	34	107
9	1191	1566

However, one step remains. The FCC correctly reflected the input for LnLoops at an input value of 2688, which reflects the exchanges excluding Barrow, as that is the basis for ASTAC's legacy USF support impacted by QRA. Thus, it is necessary to change the LnExchanges input value to 8.0 and reflect Ln road miles at an input value of 637 and Ln road crossings at an input value of 780.

We respectfully submit that the FCC properly reflected ASTAC's study area boundary with the input value of 2688 for LnLoops, and thus have not submitted an Appendix C filing regarding study area boundary submission as all that is needed in this case is to revise the exchange counts and related miles/crossings.

In our ex parte meeting of July 11, 2012, Ms. Mattey of the WCB staff agreed to reflect the tribal percentage for ASTAC at 100% in order to comport with the March 31, 1999 BIA directive for Alaska.

Process to Generate Road Crossings

An investigation and subsequent manual verification of the physical number of road crossings was undertaken due to the specific request from the FCC during an ex parte meeting with Arctic Slope Telephone Association Cooperative, GVNW, and members of the Wireline Competition Bureau.

During the ex parte, members of the WCB noted that if they were to consider a change in road miles, they would also have to consider a change in road crossings. They asked that any estimate of road miles sent to them be supplemented with an estimate of road crossings as well. We are responding with this submission.

A shapefile representing the study area for Arctic Slope Telephone Association Cooperative, Inc. (ASTAC) was obtained from the Regulatory Commission of Alaska website.[i] Road data was acquired for North Slope Borough Alaska using the 2010 Tiger/Line Shapefiles web interface.[ii] Both the road and service area files were layered over Satellite imagery of Alaska in ESRI ArcGIS 10.0 software. The "intersect" tool was used, with road and service area data as features and with output set to "line" to clip the road data to the service area. This process removed roads that lay outside the service area boundary. The "intersect" tool was used again, with road data as the target feature and output set to "point" to create a node at the vertex of each road intersection. The "Collect events with count rendering" tool from the Spatial Statistics toolbox was used with the node feature layer to identify total intersections. The "ICOUNT" field in the resulting feature layer reported the total number of road crossings at each node. The "Summary statistics" tool was used to accumulate road intersections by the number of road crossings for each intersection. We also verified the count manually.

[i] http://rca.alaska.gov/RCAWeb/Certificate/CertificateDetails.aspx?id=519055f4-90c2-43ba-bdac-5afe81e5f273

[ii] http://www.census.gov/cgi-bin/geo/shapefiles2010/main